CARBON DIOXIDE / TEMPERATURE / RELATIVE HUMIDITY DETECTOR

CHTDT SERIES

The CHTDT transmitter incorporates three sensors in one duct mount enclosure for the most efficient environmental monitoring and control system. It uses Infrared Technology to monitor CO2 levels within a range of 0 – 2000 ppm, a field-proven RH sensor to monitor relative humidity from 0-100 %RH and a curve-matched thermistor to measure temperature over common field-selectable ranges. A hinged and gasketed Polycarbonate enclosure is included for ease of installation

PRODUCT HIGHLIGHTS

• 0-200PPM for analog and 0-20,00PPM CO2 sensor range.

• Analog outputs, 4-20mA or 0-5 /10Vdc

• BACnet or Modbus communication

• Optional form A relay selectable alarm point.

ENGINEERING SPEC’S

* Shall be IP65 (NEMA 4X) with a UL94-V0 rated enclosure
* External mounting tabs must be slotted & tapered away from enclosure to ease field installation
* Enclosure shall be complete with neoprene gasket for duct to enclosure seal
* Enclosure shall be complete with threaded (1/2 NPT and/or M16) conduit connection
* Cover must be hinged and securely attached in the open position
* Operating range must be 0 to 50°C (32 to 122°F), 0-95 %RH non-condensing
* Cover must contain security screw as extra protection from opening
* Product shall be CE approved

SPECIFICATIONS

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| DESCRIPTION | ENGINEERING SPEC |
| CO2 SENSOR | Measurement Type: Non-Dispersive Infrared (NDIR), diffusion samplingMeasurement Range: Sensor 1 - 0-2000ppmSensor 2 - 0-20,000ppmProgrammable spanStandard Accuracy: +30ppm +3% of reading (Sensor 1, 0-2000ppm with Auto-cal)+75ppm or 10% of reading (whichever is greater)(Sensor 2, 0-20,000ppm range with dual channel sensor)Temperature Dependence: 0.2 %FS per °CStability: 2 %FS over life of sensor (15 years typical) Sensor 1 (0-2000ppm),<5 %FS over life of sensor (15 years typical) Sensor 2 (0-20,000ppm) |
| PRESSURE DEPENDANCE | 0.13% of reading per mm Hg |
| RESPONSE TIME | <2 minutes for 90% step change typical |
| WARM UP TIME | <2 minutes |
| ALTITUDE CORRECTION | Programmable from 0-5000 ft via keypad |
| TEMPERATURE SENSOR | Sensing Element: 10,000 thermistor +0.2°C (0.4°F)Range: 0 to 35°C (32 to 95°F) or 0 to 50°C (32 to 122°F) selectable via keypadResolution: 0.1°C |
| RELATIVE HUMIDITY SENSOR | Sensor: Thermoset polymer based capacitiveAccuracy: +2 %RHRange: 0-100 %RH, non-condensingResolution: 2 %RHHysteresis: +3 %RHResponse Time: 15 seconds typicalStability: +1.2 %RH typical @ 50 %RH in 5 years |
| POWER SUPPLY | 20 - 28 Vac/dc (non-isolated half-wave rectified) |
| CONSUMPTION | Current: 120 mA max @ 24 Vdc, 212 mA max @ 24 VacVoltage: 79 mA max @ 24 Vdc, 129 mA max @ 24 Vac |
| OUTPUT SIGNALS | 4-20 mA active (sourcing) 0-5 Vdc / 0-10 Vdc (field selectable) |
| OUTPUT DRIVE CAPABILITY | Current: 550Ω maximumVoltage: 5 KΩ minimum |
| RELAY  | Contact Ratings: Form A contact (N.O.), 2 Amps @ 140 Vac, 2 Amps @ 30 VdcRelay Trip Point: Programmable via keypadRelay Hysteresis: Programmable via keypad |
| COMMUNICATION  | Hardware: Isolated 2-wire RS-485 MS/TPSoftware: BACnet or Modbus Baud Rate: 9600, 19200, 38400, 57600, 76800 or 115200Address Range: Modbus - 1-255 |
| OPERATING CONDITIONS | 0 to 50°C (32 to 122°F), 0-95 %RH non-condensing |
| STORAGE TEMPERATURE | -20 to 60°C (-4 to 140°F) |
| ENCLOSURE | Polycarbonate, UL94-V0, IP65 (NEMA 4X)116.5mm x 99.7mm x 53.7mm (4.6” x 3.9” x 2.1”) |
| PROBE SIZE | 152mm L x 22.5mm D (6” x 0.85”) |
| COUNTRY OF ORIGIN | Canada |